

Practitioner's Docket No. MPI02-110P1RNM

U.S.S.N. 10/678,872

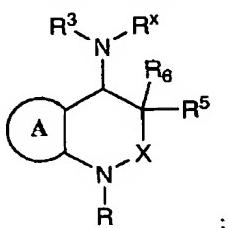
IN THE CLAIMS:

Please cancel claims 1-24, and add new claims 25-44.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-24. (canceled)

25. (previously presented) A compound represented by the following structural formula:



or a pharmaceutically acceptable salt thereof, wherein:

Ring A is an optionally substituted monocyclic aromatic ring;

R is -X₁-R¹;

R^x is -X₂-R⁴, and R³ is an optionally substituted aromatic group; or

-NR^xR³, taken together, is an optionally substituted non-aromatic nitrogen containing heterocyclic group;

X is -C(O)- or -C(R²)₂-;

X₁ and X₂ are each independently a bond, S(O), S(O)₂, C(O) or C(O)NH;

R¹ is H or an optionally substituted, cycloaliphatic group, aromatic group or non-aromatic heterocyclic group;

provided that when X₁ is a bond, SO or SO₂, then R¹ is not H;

each R² is independently H, -X₄-R⁸ or an optionally substituted, aliphatic group, cycloaliphatic group, aromatic group or non-aromatic heterocyclic group;

R⁴ is H, -X₆-R¹⁰ or an optionally substituted, aliphatic group, cycloaliphatic group, aromatic group or non-aromatic heterocyclic group;

provided that when X₂ is a bond, SO or SO₂, then R⁴ is not H;

X₄ and X₆ are each independently a straight or branched hydrocarbyl group optionally substituted with one or more groups selected from the group consisting of halo, -OH, =O, C₁-C₃ alkoxy, nitro and cyano;

R⁵ and R⁶ are each independently H or C₁-C₃ alkyl; and

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R^8 and R^{10} are each independently H, -C(O)OR' or an optionally substituted, cycloaliphatic group, aromatic group or non-aromatic heterocyclic group;

where,

the optional substituents on the aliphatic group, the cycloaliphatic group or the non-aromatic heterocyclic group are one to three groups each independently selected from the group consisting of halo, R^{11} , =O, =S, =NNHR*, =NN(R*)₂, =NNHC(O)R*, =NNHCO₂(alkyl), =NNHSO₂ (alkyl) and =NR*;

the optional substituents on unsaturated carbon atoms of the aromatic group is R^{11} ;

the optional substituents on a nitrogen atom of the aromatic group or the nitrogen atom of the non-aromatic nitrogen containing heterocyclic group are one to three groups each independently selected from the group consisting of R^+ , -N(R^+)₂, -C(O)R⁺, -CO₂R⁺, -C(O)C(O)R⁺, -C(O)CH₂C(O)R⁺, -SO₂R⁺, -SO₂N(R^+)₂, -C(=S)N(R^+)₂, -C(=NH)-N(R^+)₂ and -NR⁺SO₂R⁺;

R^{11} is one to four substituents each independently selected from the group consisting of halo, R°, -OH, -OR°, -SH, -SR°, 1,2-methylenedioxy, 1,2-ethylenedioxy, protected -OH, phenyl, [R¹²]-phenyl, -O(phenyl), -O([R¹²]-phenyl), -CH₂(phenyl), -CH₂[R¹²]-phenyl), -CH₂CH₂(phenyl), -CH₂CH₂[R¹²]-phenyl), -NO₂, -CN, -N(R')₂, -NR'CO₂R°, -NR'C(O)R°, -NR'NR'C(O)R°, -N(R')C(O)N(R')₂, -NR'NR'C(O)N(R')₂, -NR'NR'CO₂R°, -C(O)C(O)R°, -C(O)CH₂C(O)R°, -CO₂R°, -C(O)R°, -C(O)N(R')₂, -OC(O)N(R')₂, -S(O)₂R°, -SO₂N(R')₂, -S(O)R°, -NR'SO₂N(R')₂, -NR'SO₂R°, -C(=S)N(R')₂, -(CH₂)_yN(R')₂, -C(=NH)-N(R')₂, -(CH₂)_yC(O)N(R')₂, -(CH₂)_yNHC(O)R° or -(CH₂)_yNHC(O)CH(V-R')(R');

R' is H, R°, -CO₂R°, -SO₂R° or -C(O)R°;

y is 0-6;

V is C₁-C₆ alkylene;

each R* is independently H, an aliphatic group or an aliphatic group substituted with R¹²;

R⁺ is H, phenyl, [R¹²]-phenyl, -O(phenyl), -O([R¹²]-phenyl), -CH₂(phenyl), -

CH₂[R¹²]-phenyl), a heteroaryl group, a non-aromatic heterocyclic group, an aliphatic group or an aliphatic group substituted with R¹²;

R° is an aliphatic group, a cycloaliphatic group, an aromatic group, an aralkyl group or a non-aromatic heterocyclic group, each group being optionally substituted with R¹²;

R¹² is one to four substituents each independently selected from the group consisting of halo, C₁-C₆ alkyl, (halo),C₁-C₆ alkyl, C₃-C₈ cycloalkyl, (halo),C₃-C₈ cycloalkyl, -CN, -CF₃, -CHF₂, -CH₂F, -OCF₃, -OCHF₂, -OCH₂F, -OR', -OR¹³C(O)R', -C(O)OR', -C(O)N(R¹⁶)₂, -N(R¹⁶)₂, -NO₂, -NR¹⁶C(O)R', -NR¹⁶C(O)OR', -NR¹⁶C(O)N(R¹⁶)₂, -NR¹⁶SO₂R¹⁷, -S(O)_qR¹⁷, -R¹³NR¹⁶C(O)R', -R¹³C(O)R', -R¹³NR¹⁶C(O)OR', tetrazolyl, imidazolyl or oxadiazolyl;

R¹³ is C₁-C₆ alkyl or C₃-C₈ cycloalkyl;

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each R¹⁶ is independently R' or benzyl;

R¹⁷ is R¹³ or -CF₃;

q is 0-2; and

r is 1-3;

provided that the compound is not 2-methyl-N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(2-methyl-1-oxobutyl)-4-quinolinyl]-butamide; N-(1-Acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl-heptamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(1-oxo-3-phenylpropyl)-4-quinolinyl]-benzenepropanamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(3-nitrobenzoyl)-4-quinolinyl]-hexanamide; N-[1,1'-biphenyl]-3-yl-N-[1,2,3,4-tetrahydro-1-(4-methoxybenzoyl)-2-methyl-4-quinolinyl]-acetamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-(4-nitrophenyl)-heptanamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-(4-methoxyphenyl)-2-methyl-propanamide; N-[1-(4-fluorobenzoyl)-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-butanamide; N-phenyl-N-[1,2,3,4-tetrahydro-1-(3-methoxybenzoyl)-2-methyl-4-quinolinyl]-pentanamide; 2-ethyl-N-[1-(2-ethyl-1-oxobutyl)-1,2,3,4-tetrahydro-2,8-dimethyl-4-quinolinyl]-N-(2-methylphenyl)-butanamide; N-[1-[(4-fluorophenyl)acetyl]-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-propanamide; N-phenyl-[1,2,3,4-tetrahydro-2-methyl-1-(4-nitrobenzoyl)-4-quinolinyl]-octanamide; N-cyclohexyl-4-[(cyclohexylamino)carbonyl]phenylamino]-3,4-dihydro-2-methyl-1(2H)-quinolinecarboxamide; N-[1-(4-ethylbenzoyl)-1,2,3,4-tetrahydro-2,8-dimethyl-4-quinolinyl]-N-(2-methylphenyl)-3-(4-nitrophenyl)-2-propenamide; 3-(4-methoxyphenyl)-N-phenyl-N-[1,2,3,4-tetrahydro-1-[3-(4-methoxyphenyl)-1-oxo-2-propenyl]-2-methyl-4-quinolinyl]-2-propenamide; 4-[(ethoxyoxoacetyl)phenylamino]-3,4-dihydro-2-methyl-4-oxo-ethyl ester-1(2H)-quinolineacetic acid; N-[1-(3-cyclohexyl-1-oxopropyl)-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-cyclohexanepropanamide; 4-(acetylphenylamino)-3,4-dihydro-2-methyl-gamma-oxo-1(2H)-quinolinepentanoic acid; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-2,2-dimethyl-N-phenyl-propanamide; N-(1-benzoyl-6-bromo-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl-pentanamide; N-[1-(2-furanylcarbonyl)-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-acetamide; 2-methyl-N-phenyl-N-[1,2,3,4-tetrahydro-1-(3-methoxybenzoyl)-2-methyl-4-quinolinyl]-propanamide; N-[1-[(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)acetyl]-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-acetamide; 2,2,2-trifluoro-N-phenyl-N-[1,2,3,4-tetrahydro-1-(3-methoxybenzoyl)-2-methyl-4-quinolinyl]-acetamide; 2-ethyl-N-[1-(2-ethyl-1-oxobutyl)-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-butanamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-(3-methoxyphenyl)-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(1-oxohexyl)-4-quinolinyl]-acetamide; N-(1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl-2-thiophenecarboxamide; N-[1-(2-fluorobenzoyl)-1,2,3,4-

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tetrahydro-2-methyl-4-quinolinyl]-N-phenyl- hexanamide; N-phenyl-N-[1,2,3,4-tetrahydro-1-(4-methoxybenzoyl)-2-methyl-4-quinolinyl]- hexanamide; N-phenyl-N-[1,2,3,4-tetrahydro-1-(4-methoxybenzoyl)-2-methyl-4-quinolinyl]- hexanamide; N-[1-(cyclopropylcarbonyl)-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl- cyclopropanecarboxamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-(4-methylphenyl)- acetamide; 2-methyl-N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(2-methyl-1-oxopropyl)-4-quinolinyl]- propanamide; N-phenyl-N-[1,2,3,4-tetrahydro-1-(4-methoxybenzoyl)-2-methyl-4-quinolinyl]- 2-thiophenecarboxamide; 1-(3,5-dinitrobenzoyl)-N-formyl-1,2,3,4-tetrahydro-2-methyl-N-phenyl-4-quinolinamine; N-[1-(4-chloro-3-nitrobenzoyl)-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl- acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(3-nitrobenzoyl)-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-1-(3-methoxybenzoyl)-2-methyl-4-quinolinyl]- hexanamide; N-[1-(2-furanylcarbonyl)-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-2-furancarboxamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(1-oxopropyl)-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-1-[3-(4-methoxyphenyl)-1-oxo-2-propenyl]-2-methyl-4-quinolinyl]-acetamide; 3-(2-furanyl)-N-[1-[3-(2-furanyl)-1-oxo-2-propenyl]-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-2-propenamide; N-[1-[2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)-1-oxo-3-phenylpropyl]-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-octanamide; N-[1-(3-chlorobenzoyl)-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-acetamide; Relative stereochemistry N-phenyl-N-[(2R,4S)-1,2,3,4-tetrahydro-2-methyl-1-(1-oxopropyl)-4-quinolinyl]- acetamide; Relative stereochemistry N-[(2R,4S)-1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-2-methyl-N-phenyl-propanamide; Relative stereochemistry N-[(2R,4S)-1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-hexanamide; Relative stereochemistry N-[(2R,4S)-1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-propanamide; Relative stereochemistry N-[(2R,4S)-1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-heptanamide; Relative stereochemistry N-[(2R,4S)-1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-2,2-dimethyl-N-phenyl-propanamide; N-[1-(3-fluorobenzoyl)-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-acetamide; N-[1-[4-(1,1-dimethylethyl)benzoyl]-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-acetamide; N-(1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-2-methyl-N-phenyl-propanamide; 2,2,2-trifluoro-N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(trifluoroacetyl)-4-quinolinyl]- acetamide; Relative stereochemistry N-[(2R,4S)-1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-2,2-dimethyl-N-phenyl-propanamide; Relative stereochemistry N-[(2R,4S)-1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-butanamide; Relative stereochemistry N-[(2R,4S)-1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-acetamide; Relative stereochemistry N-phenyl-N-[(2R,4S)-1,2,3,4-tetrahydro-2-methyl-1-(1-oxoheptyl)-4-quinolinyl]- acetamide; Relative stereochemistry N-phenyl-N-[(2R,4S)-1,2,3,4-tetrahydro-2-methyl-1-(1-

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oxohexyl)-4-quinolinyl]-acetamide; Relative stereochemistry N-[(2R,4S)-1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-pantanamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(1-oxo-3-phenyl-2-propenyl)-4-quinolinyl]-acetamide; Relative stereochemistry N-[(2R,4S)-1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-heptanamide; Relative stereochemistry N-[(2R,4S)-1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-acetamide; Relative stereochemistry N-[(2R,4S)-1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl]-N-phenyl-pantanamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(tricyclo[3.3.1.13,7]dec-1-ylcarbonyl)-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(1-oxopropyl)-4-quinolinyl]-propanamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(2-thienylcarbonyl)-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-1-(4-methoxybenzoyl)-2-methyl-4-quinolinyl]-2-furancarboxamide; N-phenyl-N-[1,2,3,4-tetrahydro-1-(4-methoxybenzoyl)-2-methyl-4-quinolinyl]-acetamide; N-[1-(3,5-dinitrobenzoyl)-1,2,3,4-tetrahydro-2-methyl-2-(4-nitrobenzoyl)-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-1-(2-iodobenzoyl)-2-methyl-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(2-methyl-1-oxopropyl)-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-[4-methylphenyl)sulfonyl]-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(3-methoxybenzoyl)-2-methyl-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(4-nitrophenyl)methyl]-4-quinolinyl]-acetamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(4-quinolinyl)-N-phenyl-butanamide; N-phenyl-N-[1,2,3,4-tetrahydro-2-methyl-1-(1-oxobutyl)-4-quinolinyl]-acetamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl-hexanamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl-pantanamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl-propanamide; 1-benzoyl-1,2,3,4-tetrahydro-4-(N-phenylacetamido)quinidine; N-(1-acetyl-6-bromo-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl-acetamide; N-(1-acetyl-1,2,3,4-tetrahydro-2-methyl-6-nitro-4-quinolyl)-acetanilide; N-(1-acetyl-6-chloro-1,2,3,4-tetrahydro-2-methyl-4-quinolyl)-acetanilide; N-(1-acetyl-1,2,3,4-tetrahydro-2-methyl-4-quinolyl)-N-phenyl-acetamide; N-(1-benzoyl-6-chloro-1,2,3,4-tetrahydro-2-methyl-4-quinolyl)-N-phenyl-acetamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolyl)-N-phenyl-butanamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolyl)-N-phenyl-propanamide; N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolyl)-hexanamide; N-[1-(3-chloro-benzoyl)-2-methyl-1,2,3,4-tetrahydro-quinolin-4-yl]-N-phenyl-acetamide; N-[1-(4-fluoro-benzoyl)-2-methyl-6-nitro-1,2,3,4-tetrahydro-quinolin-4-yl]-N-phenyl-acetamide; pentanoic acid (1-benzoyl-6-bromo-2-methyl-1,2,3,4-tetrahydro-quinolin-4-yl)-phenyl-amide; N-(1-benzoyl-6-chloro-2-methyl-1,2,3,4-tetrahydro-quinolin-4-yl)-N-phenyl-acetamide; N-[6-chloro-1-(4-fluoro-benzoyl)-2-methyl-1,2,3,4-tetrahydro-quinolin-4-yl]-N-phenyl-

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acetamide; N-[6-bromo-1-(4-fluoro-benzoyl)-2-methyl-1,2,3,4-tetrahydro-quinolin-4-yl]-N-phenyl-acetamide; N-(1-benzoyl-6-nitro-2-methyl-1,2,3,4-tetrahydro-quinolin-4-yl)-N-phenyl-acetamide; N-(1-benzoyl-2-methyl-1,2,3,4-tetrahydro-quinolin-4-yl)-N-phenyl-butyramide; or N-[1-(3-methoxy-benzoyl)-2-methyl-1,2,3,4-tetrahydro-quinolin-4-yl]-2,2-dimethyl-N-phenyl-propionamide.

26. (previously presented) The compound of Claim 25 wherein:

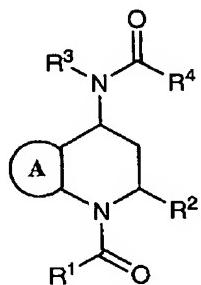
X is -CHR²-;

R² is H, methyl or ethyl;

R³ is an optionally substituted aromatic group; and

R⁵ and R⁶ are each H.

27. (previously presented) The compound of Claim 26 wherein the compound is represented by the following structural formula:



28. (previously presented) The compound of Claim 27 wherein R¹ is optionally substituted phenyl.

29. (previously presented) The compound of claim 27, wherein R4 is methyl, ethyl, propyl, iso-propyl, n-butyl, sec-butyl, tert-butyl, -CH₂OCH₃ or -CH₂OCH₂CH₃.

30. (previously presented) The compound of claim 29 wherein:

R³ is [R¹¹]-phenyl, where R¹¹ is Br, Cl, -CH₃, -N(R')₂, -NHC(O)OR', -S(O)₂CH₃, -

S(O)₂N(R')₂ or -(CH₂)_yC(O)N(R')₂; and

R⁴ is methyl, ethyl or -CH₂OCH₃.

31. (previously presented) The compound of Claim 30 wherein R¹¹ is one substituent at the para position.

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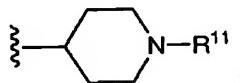
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32. (previously presented) The compound of Claim 27 wherein:
- R^1 is H or an optionally substituted, cycloalkyl group, aromatic group or non-aromatic heterocyclic group;
- R^3 is phenyl or $[R^{11}]\text{-phenyl}$;
- R^4 is H, $-\text{CH}_2\text{C(O)}R^{14}$, $-\text{CH}_2R^{15}$, $-\text{CH}_2\text{OR}^{14}$ or an optionally substituted, $C_1\text{-}C_3$ alkyl group, cycloalkyl group, aromatic group or non-aromatic heterocyclic group;
- R^{14} is H or an optionally substituted, alkyl group, aromatic group, cycloalkyl group or non-aromatic heterocyclic group; and
- R^{15} is an optionally substituted, aromatic group, cycloalkyl group or non-aromatic heterocyclic group.
33. (previously presented) The compound of Claim 27 wherein:
- Ring A is phenyl or $[R^{11}]\text{-phenyl}$, where R^{11} is at the five, six, seven and/or eight position;
- R^1 is R^{18} ;
- R^4 is R^{18} , $C_1\text{-}C_4$ alkyl, $-\text{CH}_2\text{OH}$, $-\text{CH}_2\text{OCH}_3$, $-\text{CH}_2\text{OCH}_2\text{CH}_3$, $-\text{CH}_2\text{CH}_2\text{OCH}_3$, or $-\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_3$; and
- R^{18} is an optionally substituted, phenyl, pyridyl, furanyl, thiophenyl, isoxazolyl, imidazolyl, pyrazolyl, pyrrolyl, benzofuranyl, tetrazolyl, thiazolyl, benzyl, benzothiazolyl, benzoimidazolyl, benzotriazolyl, benzomorpholinyl, benzopyrazolyl, indolyl, $-\text{CH}_2\text{-}(N\text{-pyridyl})$, $-\text{CH}_2\text{-furanyl}$, $-\text{CH}_2\text{-thiophenyl}$, $-\text{CH}_2\text{-isoxazolyl}$, $-\text{CH}_2\text{-imidazolyl}$, $-\text{CH}_2\text{-pyrazolyl}$, $-\text{CH}_2\text{-pyrrolyl}$, $-\text{CH}_2\text{-benzofuranyl}$, $-\text{CH}_2\text{-tetrazolyl}$, $-\text{CH}_2\text{-thiazolyl}$, $-\text{CH}_2\text{-tetrazolyl}$, $-\text{CH}_2\text{-benzothiazolyl}$, $-\text{CH}_2\text{-benzimidazolyl}$, $-\text{CH}_2\text{-O-phenyl}$, $-\text{CH}_2\text{C(O)-phenyl}$, naphthalimidyl, tetrahydrofuranyl, cyclohexyl, cyclopentyl or cyclopropyl group.
34. (previously presented) The compound of Claim 33 wherein:
- Ring A is phenyl or $[R^{11}]\text{-phenyl}$, where R^{11} is at the six and/or seven position;
- R^1 is phenyl, thiophenyl, furanyl, pyridyl, pyrimidinyl, oxazolyl, isoxazolyl, benzotriazolyl or benzomorpholinyl, each group being optionally substituted with R^{11} ;
- R^3 is $[R^{11}]\text{-phenyl}$; and
- R^4 is methyl, ethyl, propyl, iso-propyl, n-butyl, sec-butyl, tert-butyl, $-\text{CH}_2\text{OCH}_3$ or $-\text{CH}_2\text{OCH}_2\text{CH}_3$.
35. (previously presented) The compound of Claim 27 wherein:

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R^1 is thiophenyl, $[R^{11}]\text{-thiophenyl}$, isoxazolyl, $[R^{11}]\text{-isoxazolyl}$, pyridinyl, $[R^{11}]\text{-pyridinyl}$, benzotriazolyl, $[R^{11}]\text{-benzotriazolyl}$, benzomorpholinyl or $[R^{11}]\text{-benzomorpholinyl}$ or R^1 is phenyl or $[R^{11}]\text{-phenyl}$, where R^{11} is halo, -OR° , $\text{-N}(R')_2$, oxazolyl or



R^3 is $[R^{11}]\text{-phenyl}$, where R^{11} is Br, Cl, -CH_3 , $\text{-N}(R')_2$, $\text{-NHC(O)OR}'$, -S(O)_2CH_3 , -S(O)_2N(R')_2 or $\text{-(CH}_2)_y\text{C(O)N(R')}_2$; and

R^4 is methyl, ethyl or $\text{-CH}_2\text{OCH}_3$.

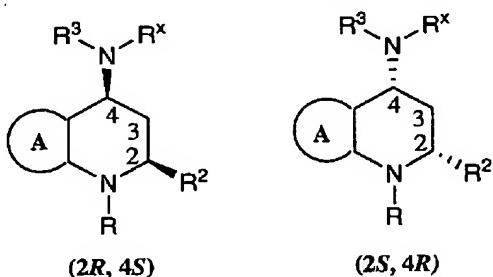
36. (previously presented) The compound of Claim 35 wherein R^3 is $[R^{11}]\text{-phenyl}$, where R^{11} is one substituent at the para position.

37. (previously presented) The compound of Claim 25 wherein:

X is -CHR^2 ; and

R^2 and NR^xR^3 are in a *cis* configuration relative to one another.

38. (previously presented) The compound of Claim 37 where the *cis* configuration is 2*S*,4*R* or 2*R*,4*S*:



39. (canceled)

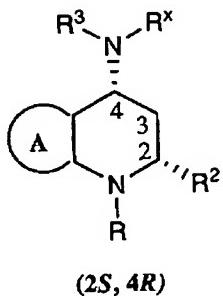
40. (previously presented) The compound of claim 25 wherein:

X is -CHR^2 ; and

R^2 and NR^xR^3 are in a *cis* configuration relative to one another, wherein the *cis* configuration is 2*S*,4*R*:

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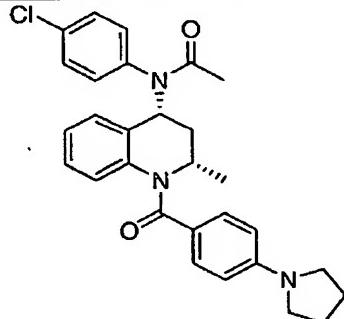
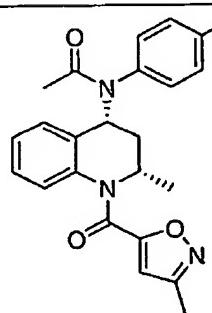
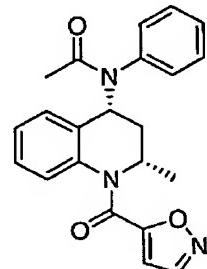
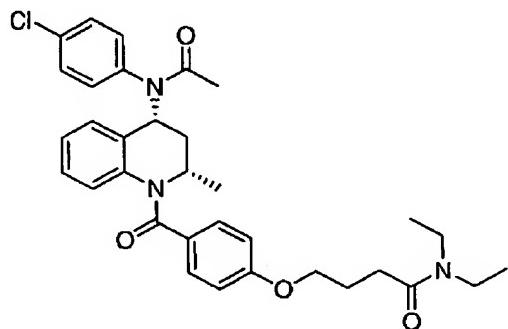
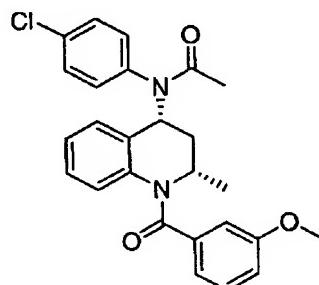
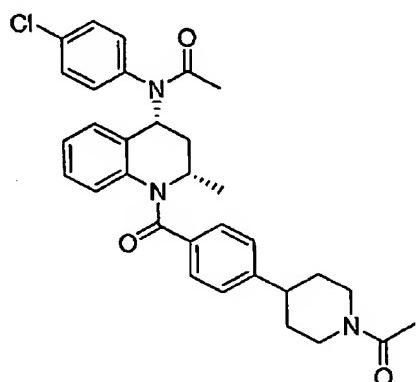
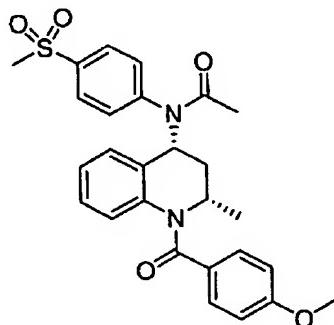
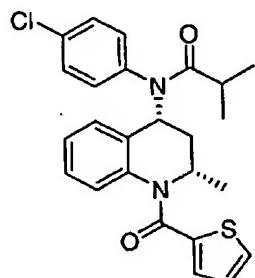
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41. (previously presented) The compound of Claim 40 wherein:
- R is -C(O)R¹, wherein R¹ is optionally substituted phenyl;
- R² is H, methyl, or ethyl;
- R³ is phenyl or [R¹¹]-phenyl;
- R^x is -C(O)R⁴; wherein R⁴ is methyl, ethyl, propyl, *iso*-propyl, *n*-butyl, *sec*-butyl, *tert*-butyl, -CH₂OCH₃ or -CH₂OCH₂CH₃; and
- Ring A is phenyl or [R¹¹]-phenyl, where R¹¹ is at the six and/or seven position.
42. (previously presented) The compound of claim 40 wherein:
- R³ is [R¹¹]-phenyl, where R¹¹ is Br, Cl, -CH₃, -N(R')₂, -NHC(O)OR', -S(O)₂CH₃, -S(O)₂N(R')₂ or -(CH₂)_yC(O)N(R')₂; and
- R⁴ is methyl, ethyl or -CH₂OCH₃.
43. (previously presented) The compound of Claim 42 wherein R¹¹ is one substituent at the para position.
44. (previously presented) A pharmaceutical composition comprising the compound of Claim 25 and a pharmaceutically acceptable diluent, excipient or carrier.
45. (new) The compound of claim 25 which is represented by a structural formula selected from the group consisting of:

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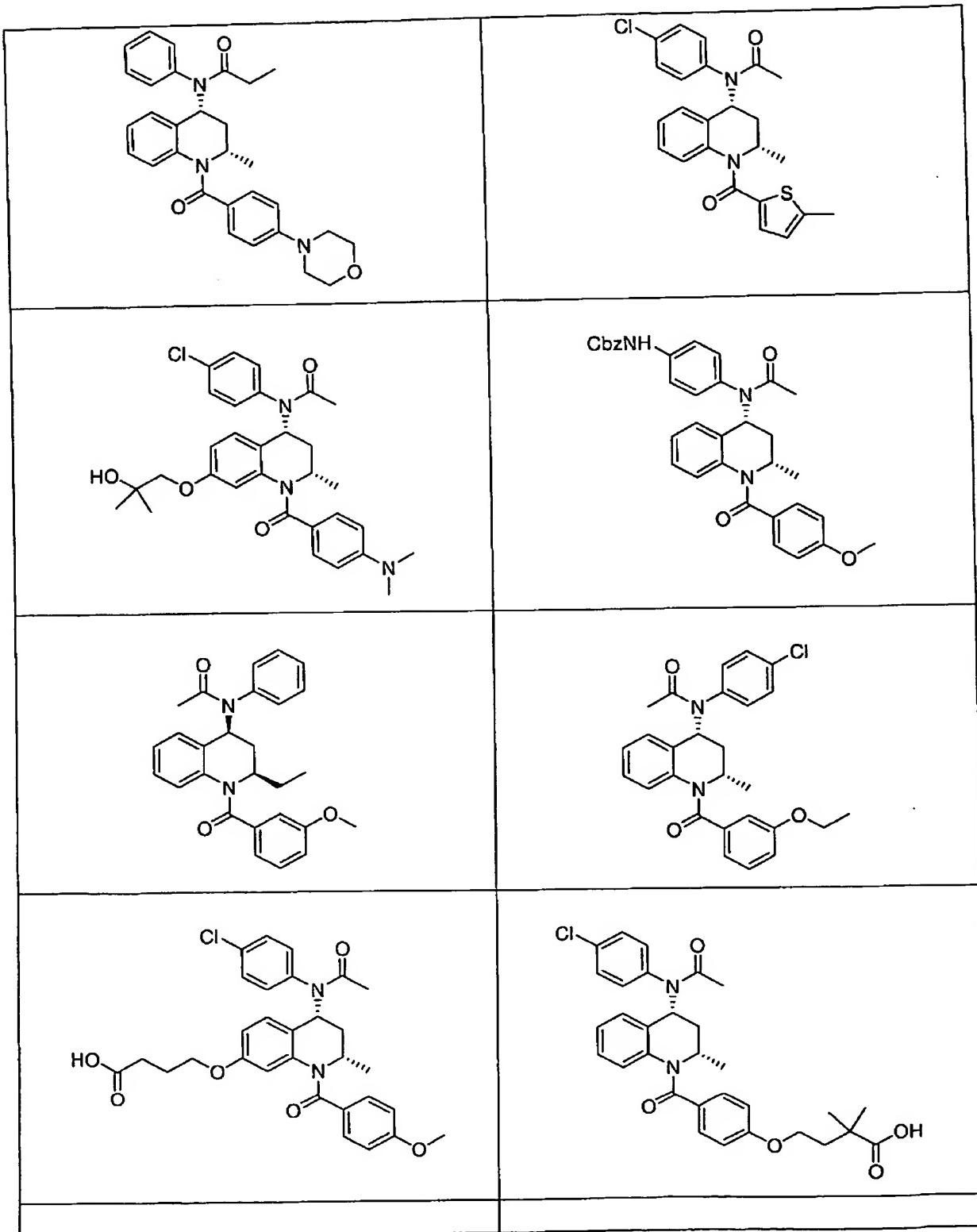
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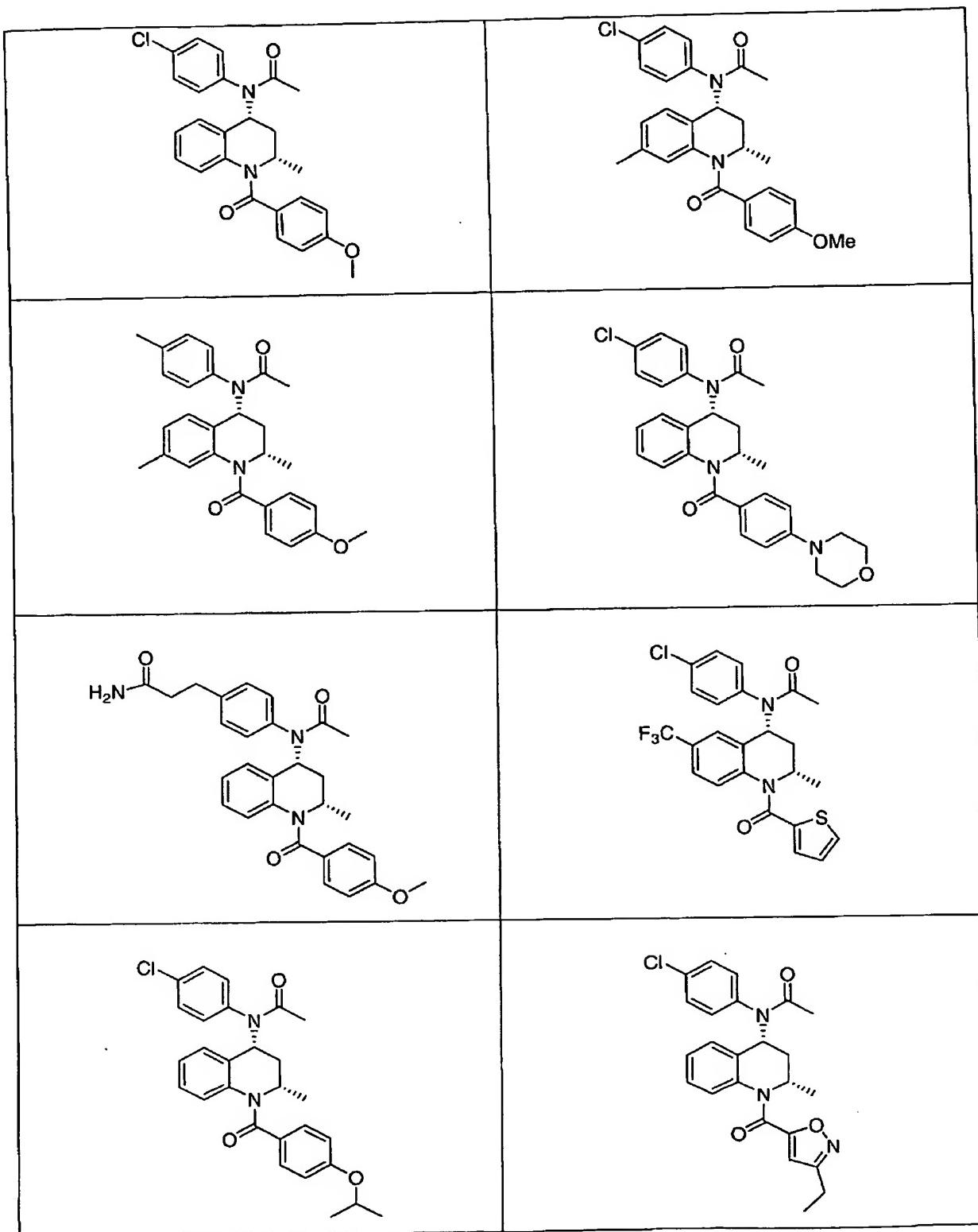
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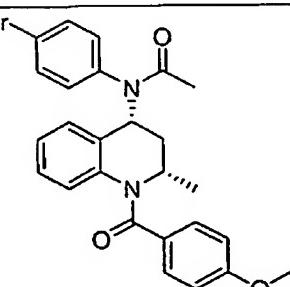
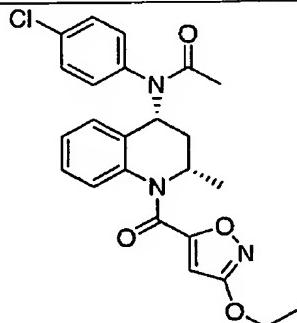
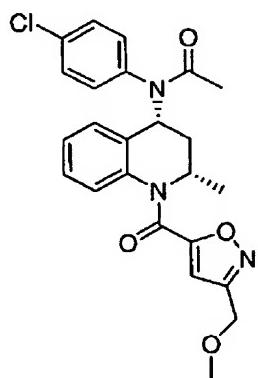
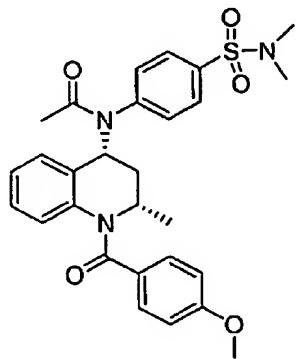
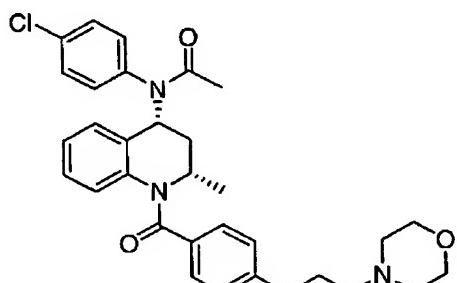
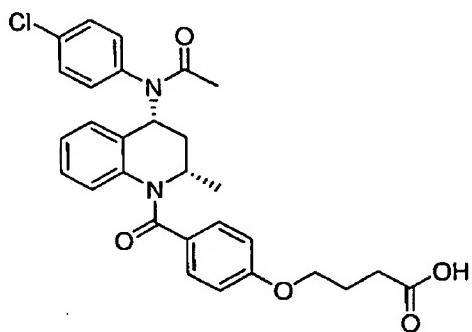
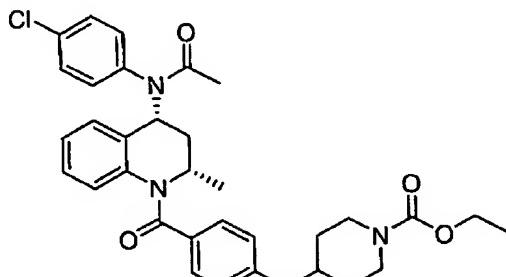
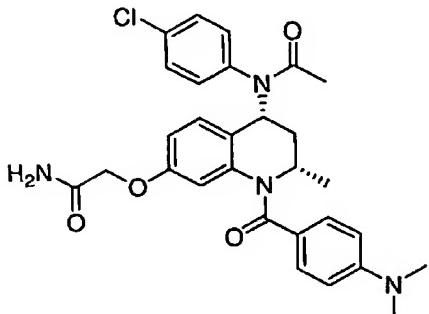
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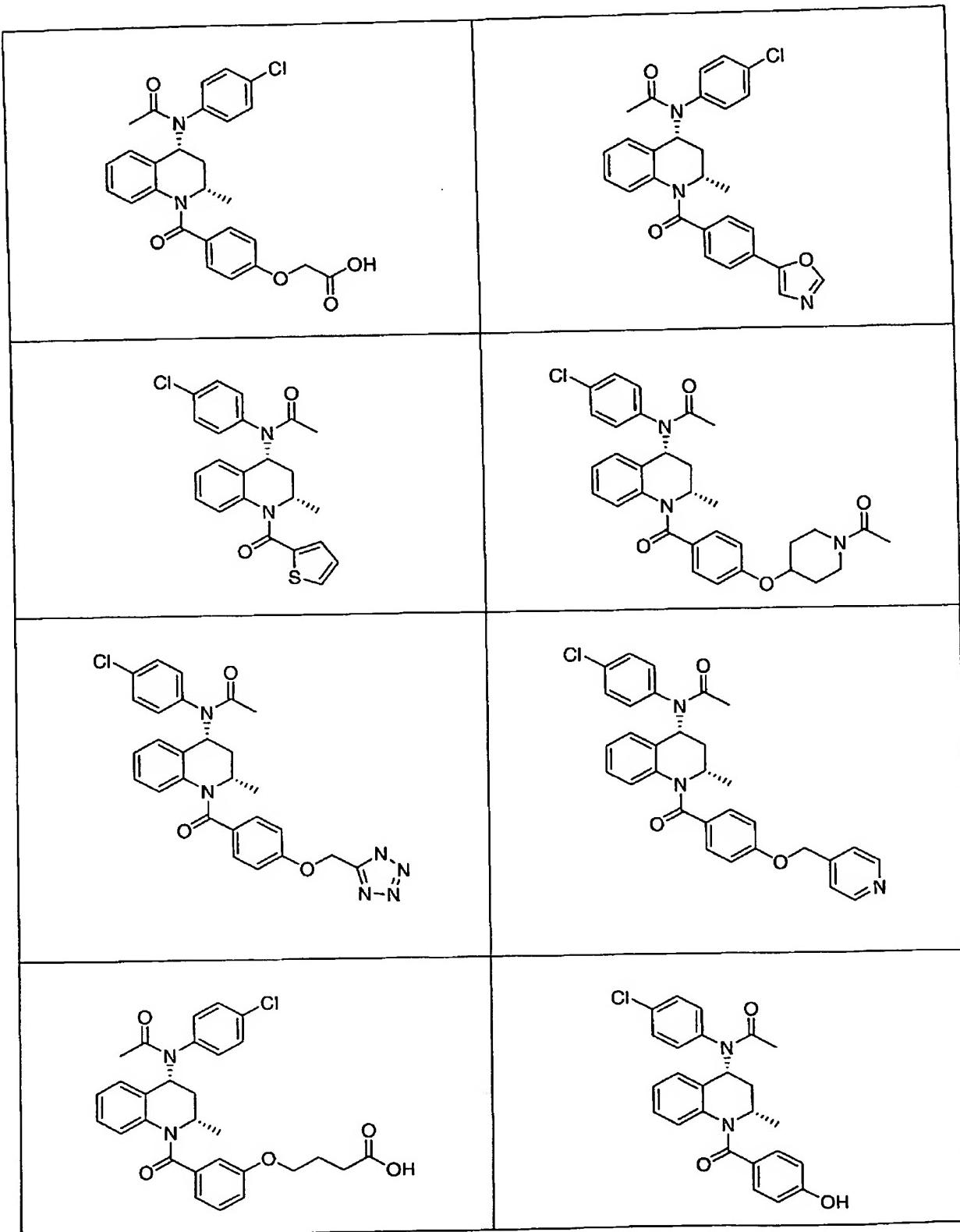
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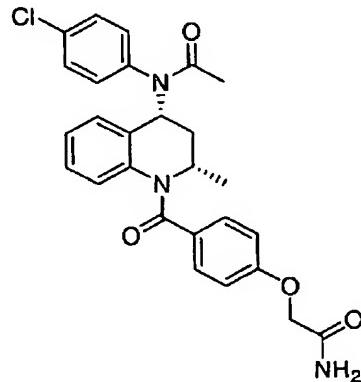
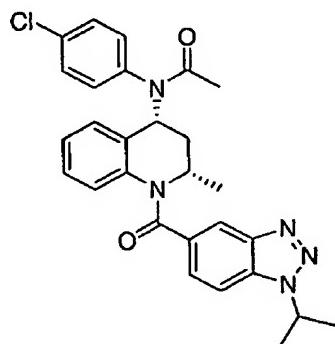
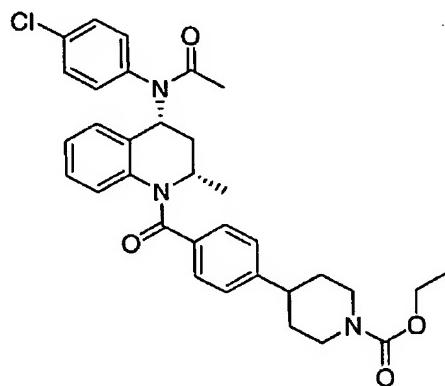
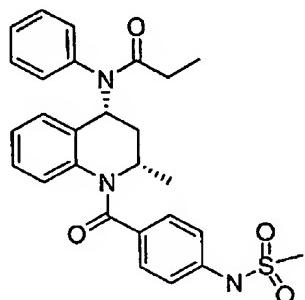
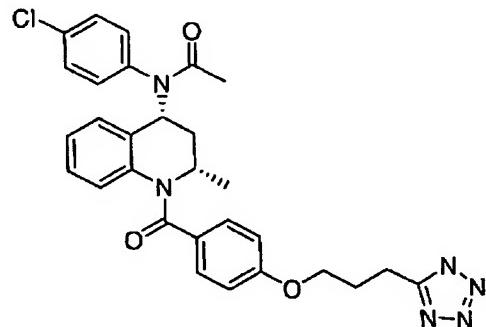
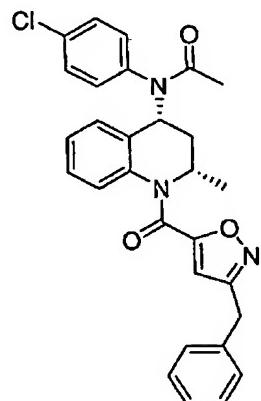
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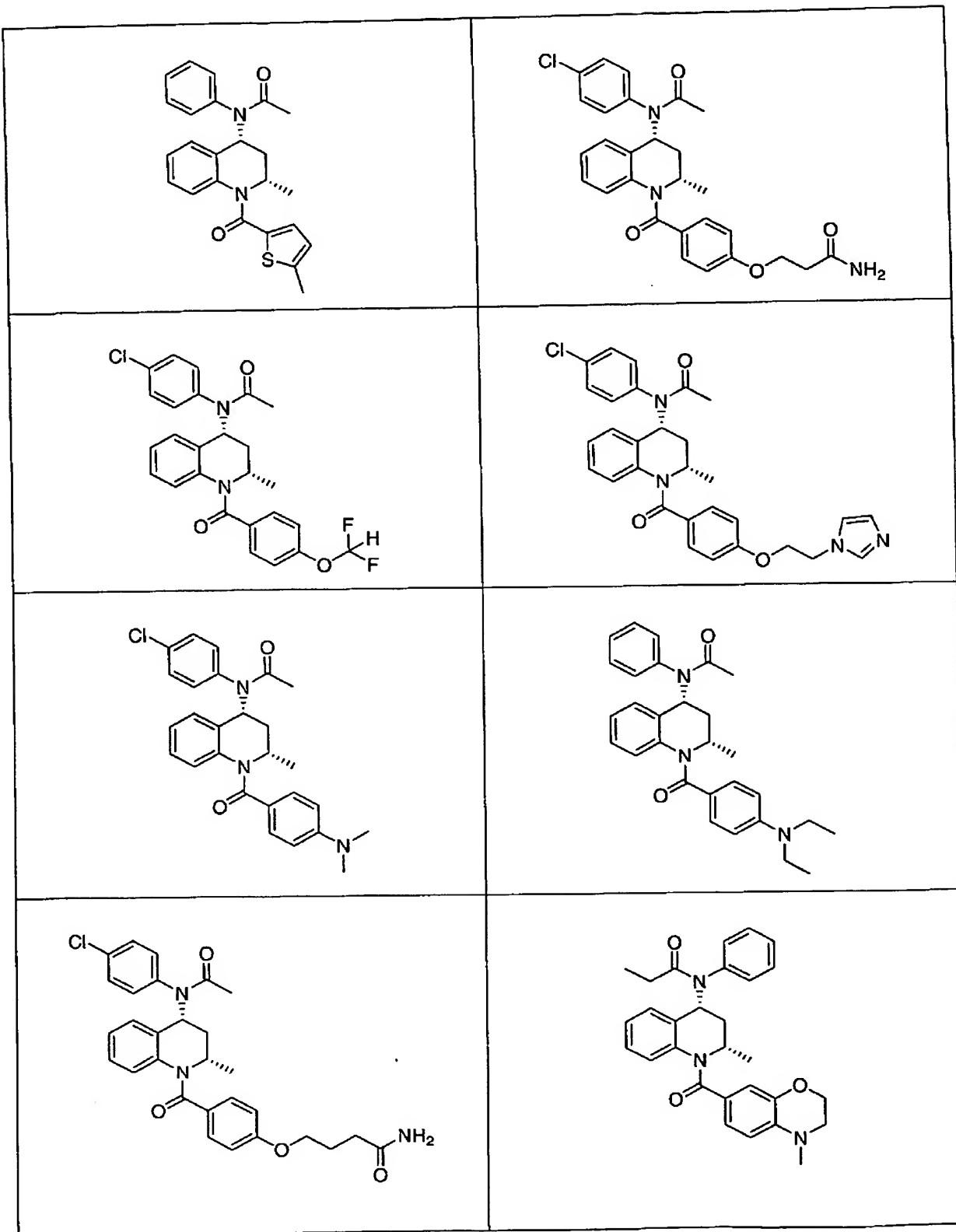
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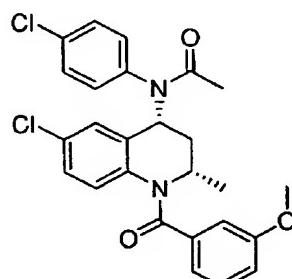
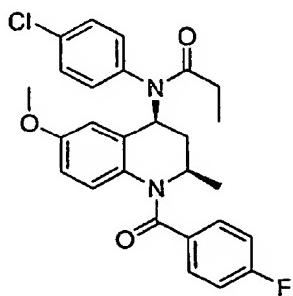
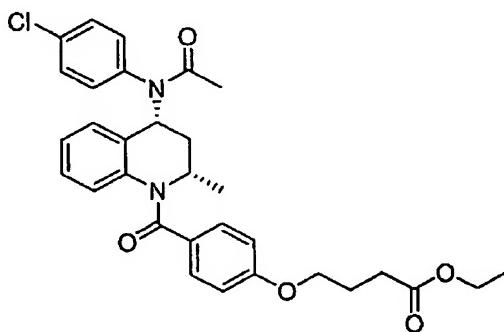
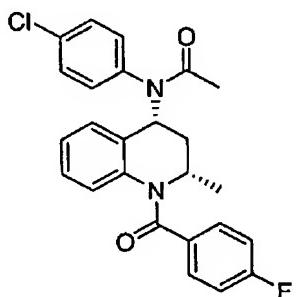
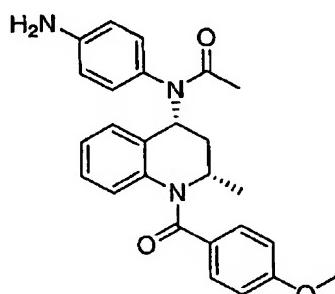
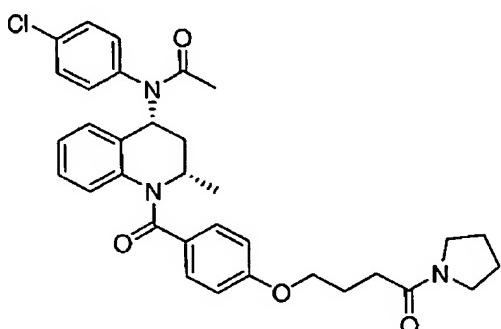
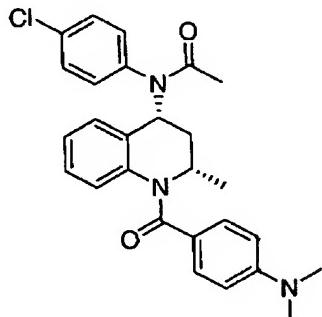
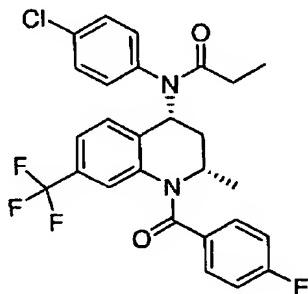
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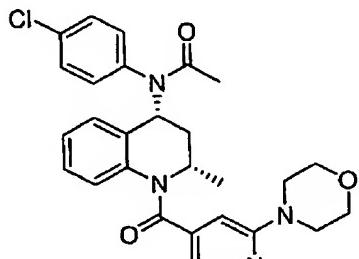
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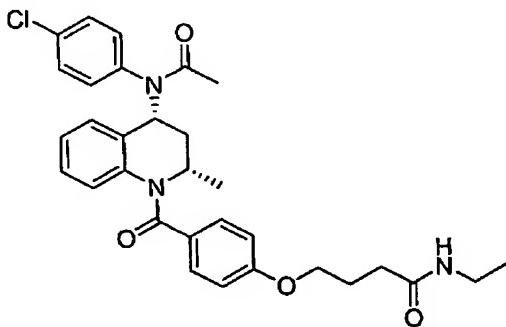
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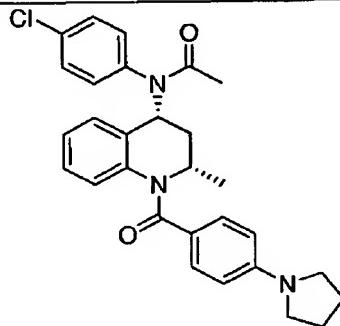
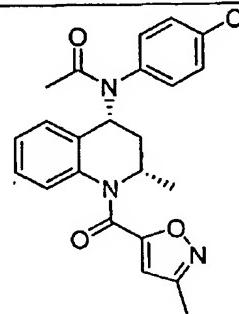
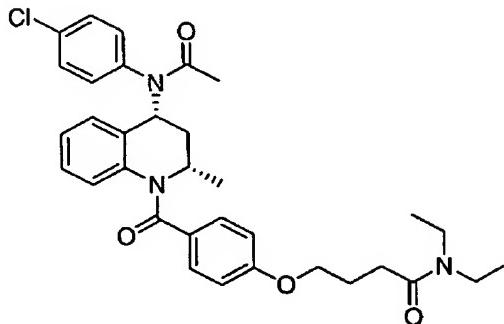
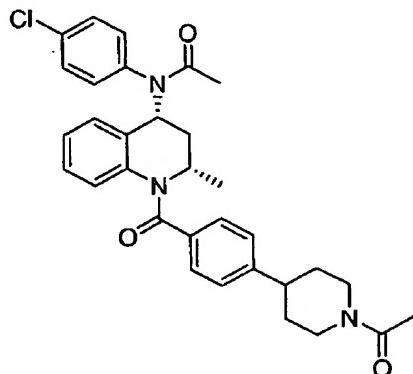
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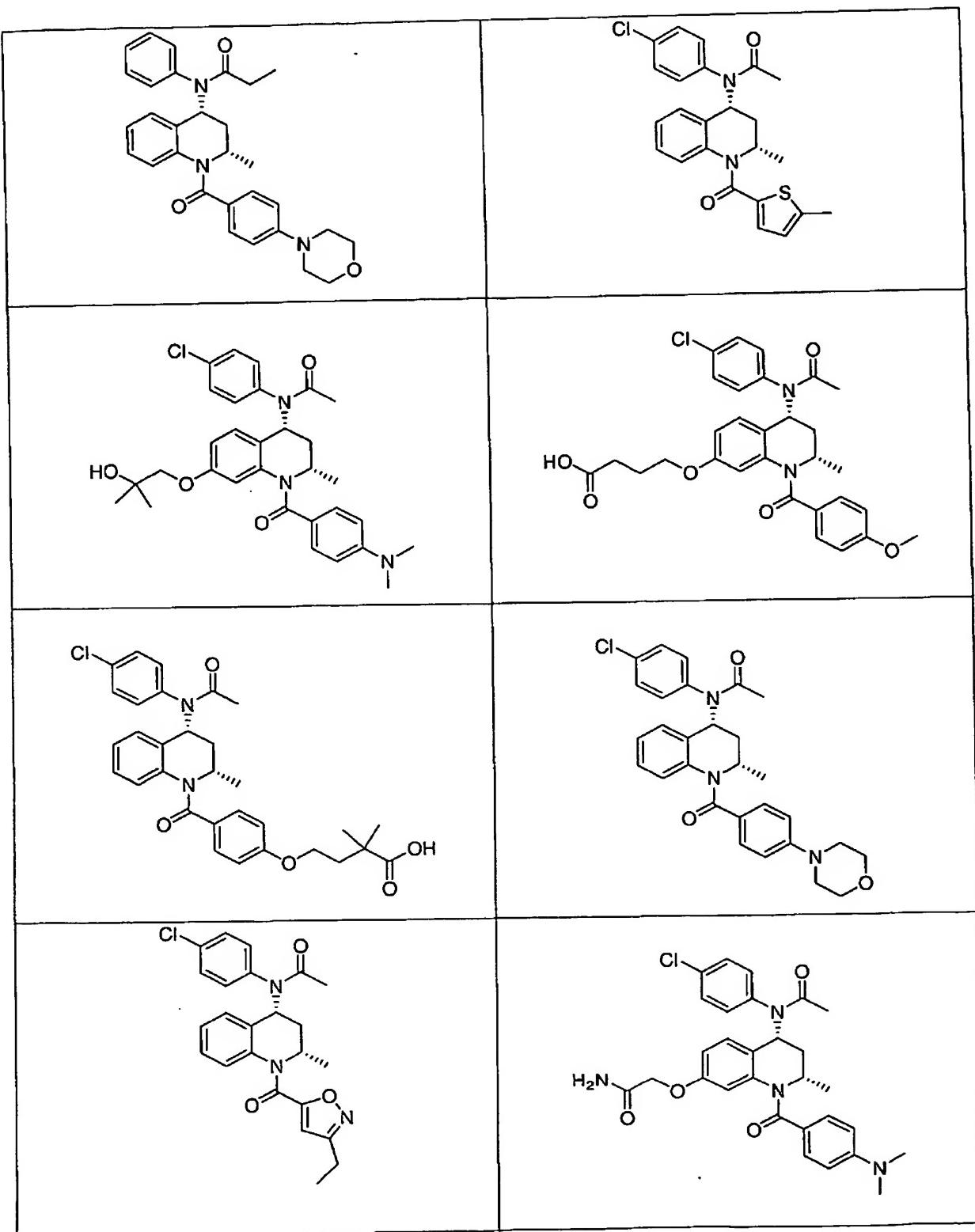


46. (new) A compound which is represented by a structural formula selected from the group consisting of:



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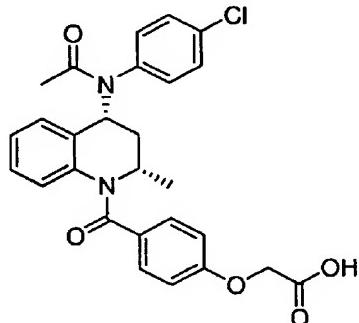
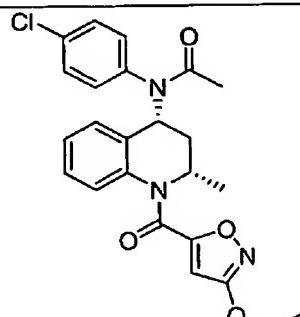
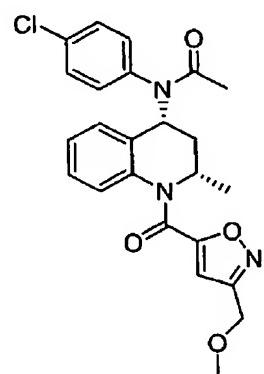
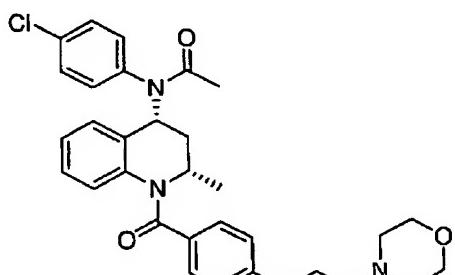
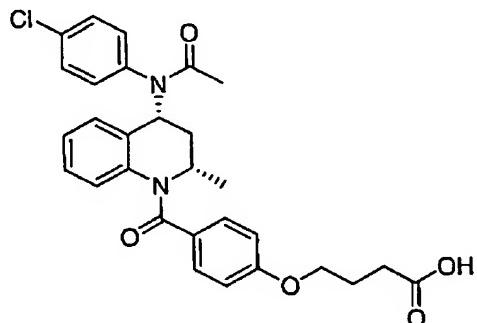
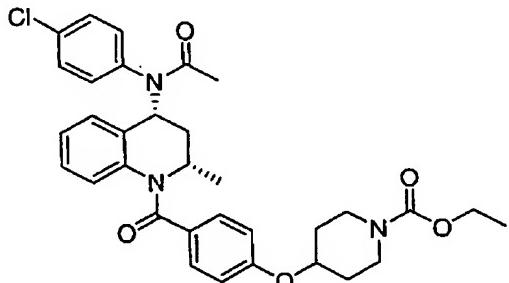
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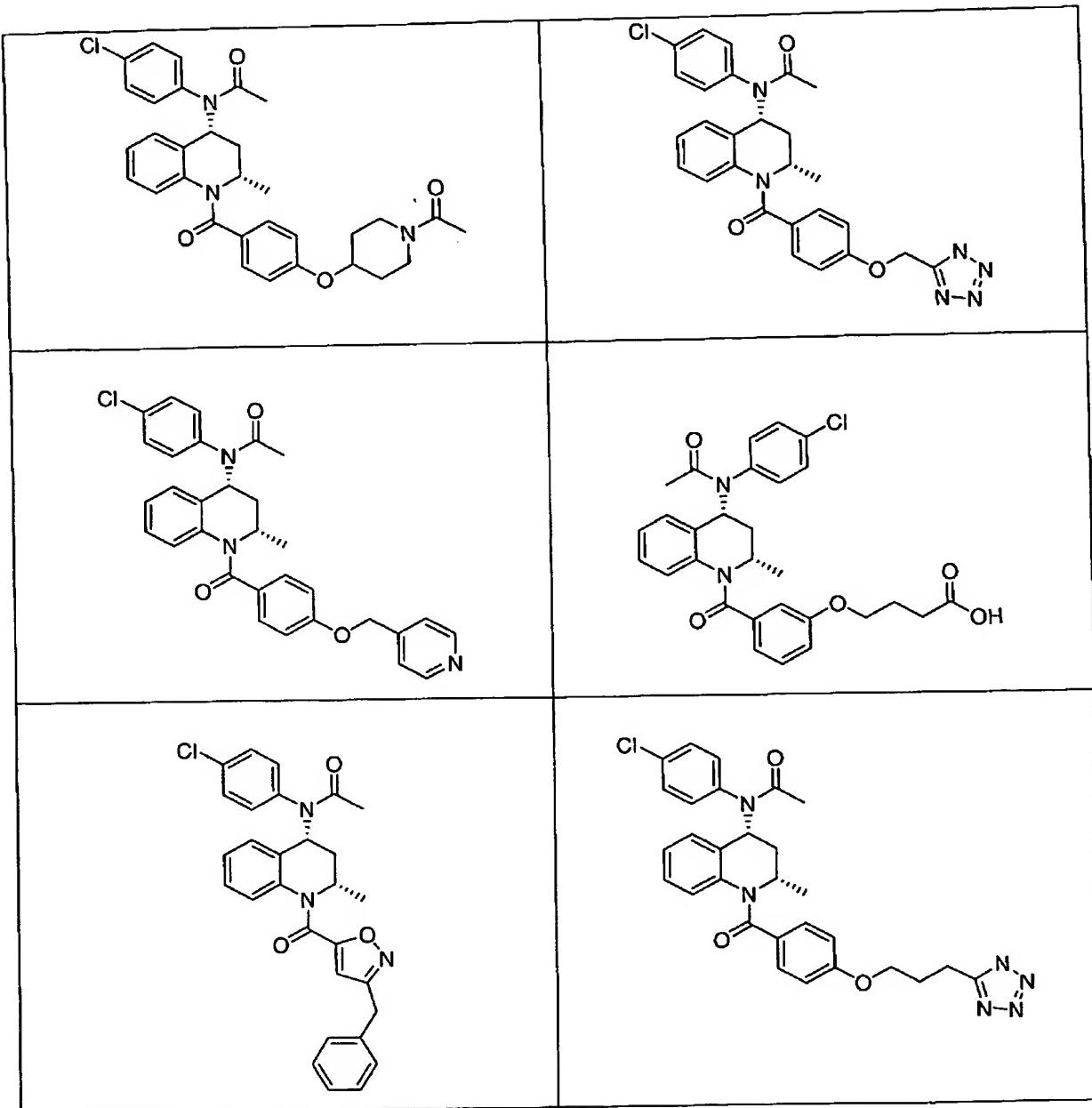
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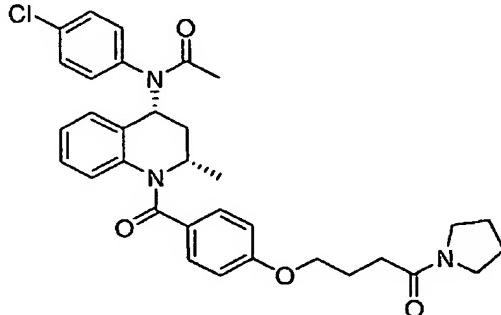
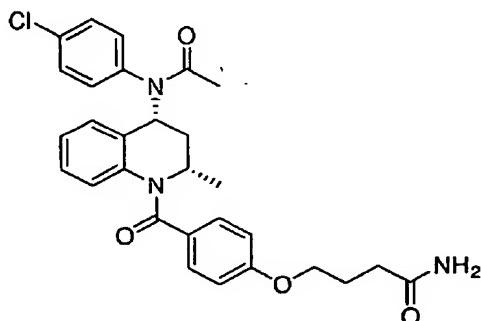
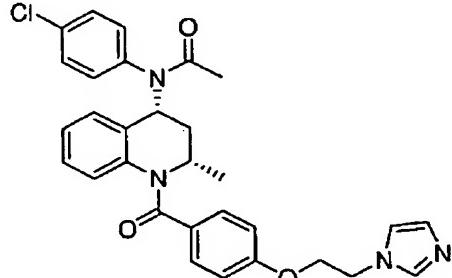
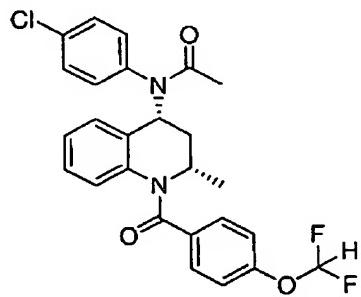
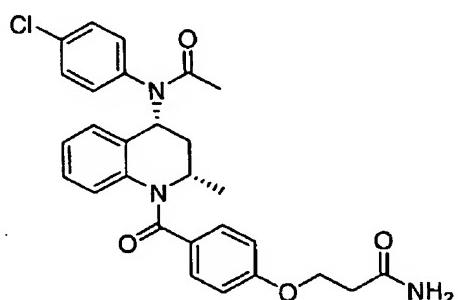
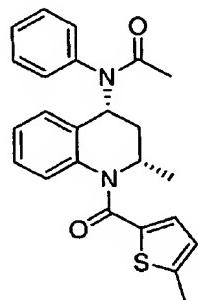
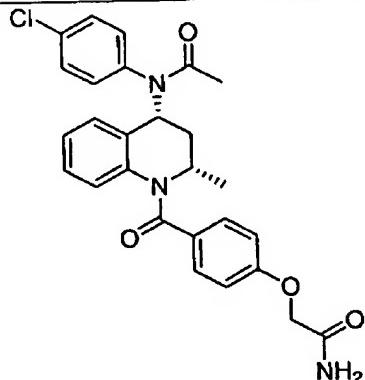
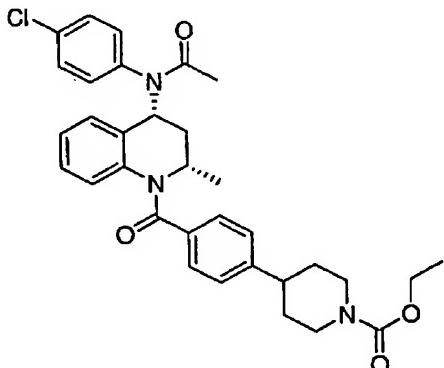
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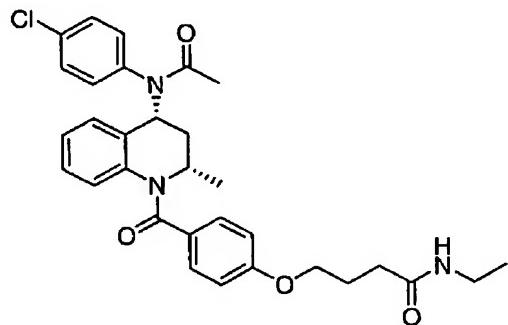
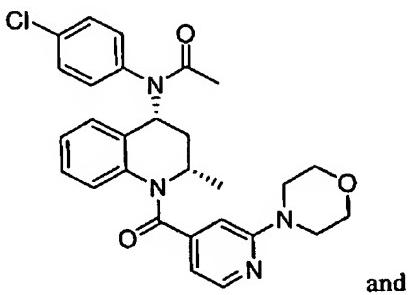
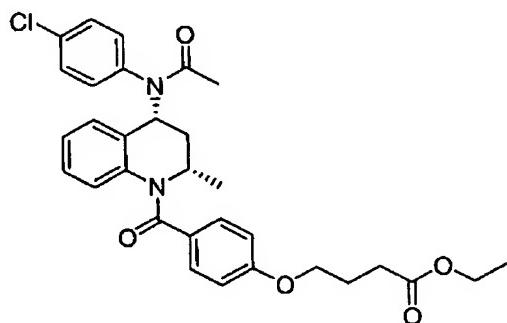
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RESPONSE

Originally, claims 1-24 were pending in the above-referenced application. Claims 1-24 were previously canceled, and claims 25-44 were previously presented. With this response, claim 39 has been canceled and has been re-presented as new claim 45, and new claim 46 has been added. No new matter has been added with claim 46. Support for the addition can be found throughout the specification and in claim 45. Claims 25-38 and 40-46 are now pending. As stated in the Office Action Response dated December 28, 2005, the subject matter of original claims 1-7 and 20-24, now canceled, will be pursued in a continuation application.

Rejection under 35 U.S.C. 112, second paragraph:

The Examiner has rejected claim 39 under 35 U.S.C. §112, second paragraph, and has stated that claim 39 is ambiguous since the structures given in the claim are so small that the actual identity of the compound being claimed is unclear. In response to the Examiner's rejection, Applicants have canceled claim 39 and have re-presented the subject matter of this claim as new claim 45 so that the size of the structures being claimed is large enough that the bonds and atoms are clearly evident. Applicants thus respectfully request that the Examiner withdraw the rejection.

Rejection under 35 U.S.C. § 103(a)

The Examiner has rejected claims 25-38 and 40-44 under 35 U.S.C. § 103(a) and has stated that the subject matter of the rejected claims are obvious over Zalukajevs (CA 48:56687, CA 62:22149, CA 59:54789, CA 67:53250, and CA 65:15179e-g) and Funabashi (CA 72:31075). The Examiner has stated that the difference between the compounds taught by Zalukajevs and Funabashi and the instantly claimed compounds is that the compounds of Zalukajevs and Funabashi are hydrogen analogues of the instantly claimed compounds. The Examiner has additionally stated that it would have been obvious to one of ordinary skill in the art to make a hydrogen analog compound of the compounds taught by Zalukajevs and Funabashi with the reasonable expectation of getting compounds having activity against allergic diseases/conditions, and has stated that the rationale is that Zalukajevs and Funabashi all teach the desirability of the compounds and the ability to make a hydrogen analog of a known compound having known utility is well within the skill of the ordinary artisan.

Applicants respectfully submit that the Examiner has not established a *prima facie* case of obviousness and thus claims 25-38 and 40-44 are not obvious over Zalukajevs (CA 48:56687, CA 62:22149, CA 59:54789, CA 67:53250, and CA 65:15179e-g) and Funabashi (CA 72:31075).

As stated in MPEP § 2142, in order to establish a *prima facie* case of obviousness: 1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available in the art, to modify the reference or to combine the teachings; 2) there must be a reasonable

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expectation of success; and 3) the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success *must both be found in the prior art, and not based on applicant's disclosure.* MPEP §2142 also states that impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Applicants respectfully submit that there is no suggestion or motivation in Zalukajevs (CA 48:56687, CA 62:22149, CA 59:54789, CA 67:53250, and CA 65:15179e-g) or Funabashi (CA 72:31075), alone or combined, or combined with knowledge generally available in the art, to modify the reference to arrive at the claimed invention. These references disclose the compounds (N-(1-benzoyl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl-acetamide, N-(1-benzoyl-6-Cl-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl acetamide, and N-(1-benzoyl-6-Br-1,2,3,4-tetrahydro-2-methyl-4-quinolinyl)-N-phenyl acetamide, and 4-anilino-1-benzoyl-1,2,3,4-tetrahydroquinalidine, which as acknowledged by the Examiner, are excluded from claim 1), and physical properties thereof, but, contrary to what the Examiner suggests, do not disclose or suggest any pharmacological utility for these compounds. Specifically, as stated in MPEP § 2144.09, if the prior art does not teach any specific or significant utility for the disclosed compounds, then the prior art is not sufficient to render structurally similar claims *prima facie* obvious because there is no motivation for one of ordinary skill in the art to make the reference compounds, much less any structually related compounds (see *In re Stemniski*, 444 F.2d 581,170 USPQ 343 (CCPA 1971)).

Additionally, Applicants respectfully submit that, at the time the invention was made, the Zalukajevs and Funabashi disclosures provided no reasonable expectation that modification of their compounds would lead to new compounds that are useful for the diseases and disorders described by the Applicants. Specifically, the teachings of Zalukajevs and Funabashi do not provide a sufficient basis for a reasonable expectation of success because they do not disclose or suggest any pharmacological utility for the compounds disclosed. Furthermore, the cited references do not even suggest making structural modifications to provide the pharmacological activity of the present invention. Thus, one of ordinary skill in the art, *at the time the invention was made*, would not have any expectation that the claimed compounds would have any pharmacological activity in view of Zalukajevs and Funabashi.

Finally, Applicants respectfully submit that Zalukajevs and Funabashi (each alone or when combined) do not teach or suggest all of the claim limitations, because 1) they do not disclose or suggest analogues as claimed by the present invention, and 2) they do not disclose a utility for the compounds disclosed by these references and thus do not teach or suggest the desirability of making any analogues of these compounds as claimed by the present invention (which are useful for the treatment of allergic diseases and disorders).

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